

**NON-EMERGENCY MEDICAL TRANSPORTATION AND THE GWINNETT  
COUNTY DEPARTMENT OF FIRE AND EMERGENCY SERVICES**

LEADING COMMUNITY RISK REDUCTION

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## **ABSTRACT**

The problem was there is a strong perception within the Gwinnett County Department of Fire and Emergency Services that non-emergency medical transport has had a negative impact upon the ability of the department to provide emergency operations. The purpose of this applied research project was to determine the true impact of non-emergency medical transportation upon the department's ability to carry out emergency operations. In addition, options were identified that would allow the department to ensure non-emergency transportation could be provided with little or no impact to emergency service provision. The descriptive research method was used to determine (a) the true impact of non-emergency transportation on emergency operations, (b) the options available to provide non-emergency medical transportation to patients, and (c) the costs of providing non-emergency transportation for the options identified.

The procedures included a review of literature pertaining to population, demographics, call volume, call type, availability of rescues, alternative means of providing non-emergency transportation, and the costs associated with providing non-emergency transportation. There was adequate information concerning population, demographics, options and costs. However, the statistical data related to call volume, call type, and availability of rescues was limited.

The results of the research provided confirmation that the Gwinnett County Department of Fire and Emergency Services' ability to provide emergency operations was negatively impacted by rescues providing non-emergency transportation. The results also recommended several options by which departments can ensure non-emergent patients are transported to receiving facilities. The options fell within two categories; transportation by department vehicles and staff, and transportation by others. The options identified included the use of taxis, limited-

duty fire personnel, private ambulance providers, and internal non-emergency crews. The monetary costs of the options varied from little or no cost to the department to the expensive option of adding non-emergency crews to the department.

Based on this study, it was recommended that fire departments, including the Gwinnett County Department of Fire and Emergency Services, investigate, develop, and implement private/public partnerships that will ensure non-emergency transport of patients will not impact emergency operations. It was also recommended that the Gwinnett County Department of Fire and Emergency Services prepare to staff and equip non-emergency ambulances to provide service should the private/public option fail.

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## INTRODUCTION

As the American population grows, so grows the emergency medical services. It has long been the theory of those leading emergency medical services (EMS) that EMS must change to meet the needs of the public. As America grows older, the needs of the population change. Emergency departments in hospitals have experienced explosive increases in volume, an increase also felt by local EMS providers. Facklemann (2003), in a recent article in USA Today identifies a report that provides validity to this:

“The report by the Centers for Disease Control and Prevention in Atlanta suggests the aging population fueled some of the increase. That will continue in the coming decades as baby boomers reach their senior years and develop chronic medical problems, says Linda McCraig, the report’s author.” (p 5A)

A large part of the increase in volume of EMS transports appears to be non-emergency medical problems. Facklemann (2003) goes on to say, “The report (GAO) classifies 10% of emergency room visits as non-urgent. In some cases people go to the emergency room because it’s the fastest way to get care after hours.” (p.5A) In addition, many believe that going by ambulance will provide them with the opportunity to be seen even sooner in the emergency department.

The problem is that there is a strong perception within the Gwinnett County Department on Fire and Emergency Services that non-emergency medical transport has a negative impact upon the ability of the department to provide emergency operations. The purpose of this applied research project is to determine the true impact of non-emergency medical transportation upon the department’s ability to carry out emergency operations. In addition, the project will identify

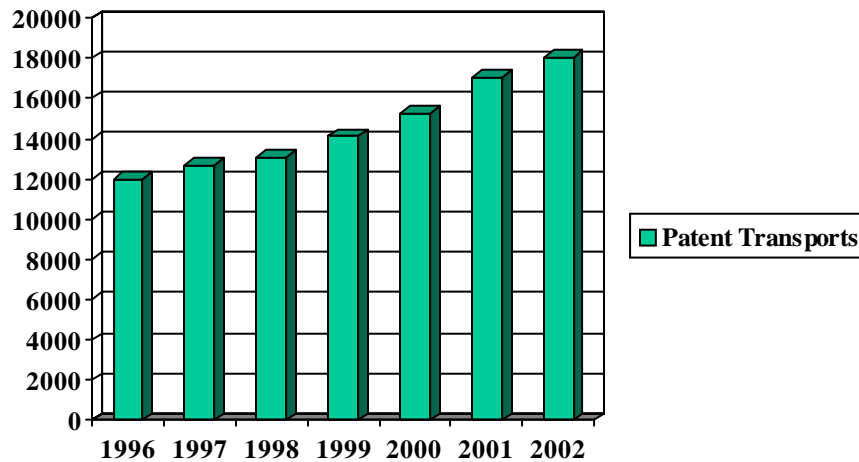
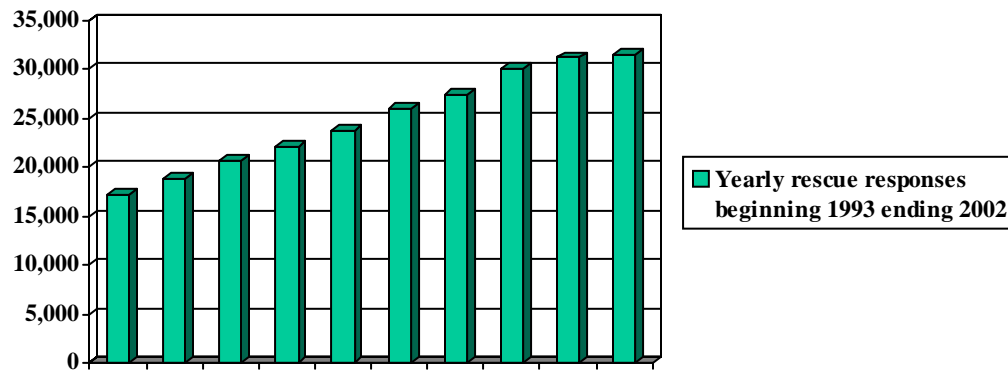
options available to continue to provide non-emergency medical transportation for the citizens of Gwinnett County. The descriptive research method will be used to investigate answers to the following research questions:

1. How has providing non-emergency medical transportation impacted the emergency response capabilities of the Gwinnett County Department of Fire and Emergency Services?
2. What options are available to provide non-emergency medical transportation to patients?
3. What are the costs of providing non-emergency medical transportation?

## **BACKGROUND AND SIGNIFICANCE**

Gwinnett County, Georgia is located in the northeast metro Atlanta area. The county consists of 434 square miles with a richly diverse demographic population.

The Gwinnett County Department of Fire and Emergency Services began providing emergency medical services in the summer of 1986 when the county hospital system gave up the service. The fire department took control of a fleet of six ambulances and approximately fifty personnel. Since that time the service has grown to include sixteen ambulances; all engines (23), ladders (6) and squads (2) are advanced life support (ALS) capable; and all supervisory and support functions required to provide service to a population of over 700,000 citizens. Calls for service have increased between eight and ten percent per year since 1993.



Many years of continuous planning and preparation have allowed the service to grow and improve. When asked during an interview by Berry (2000) in June of 2000, Fire Chief Michael Buice responded to the question, “What problems do you foresee in the next 10 years for the Gwinnett Emergency Medical Services?” His response included the following points:

- The amount of calls received and particular types of services rendered.
- Convalescent calls and the need/responsibility for them and who is going to handle them.
- Will this affect our response times? (p. 2-4)

Chief Buice was accurate in his forecast of convalescent or non-emergency transportation becoming a problem, it just has not taken ten years for it to rear its head. The Gwinnett County Department of Fire and Emergency Services has experienced an increase in requests for transportation of patients from clinics, extended care facilities, doctor's offices, and nursing homes over the last sixteen months. The actual increase may have begun prior to December 2001, however data does not exist prior to that time to confirm any increase.

There are many potential reasons for the increase in non-emergency transport calls. Snyder (2002) found that:

By the close of the 1990s, the two predominant private companies in the Atlanta area were Rural Metro and AMR. In 2002, both have lost major shares of the business back to government services or small ambulance companies. One of the major reasons for this transition is the inability of either service to manage their operations and serve the customers. Rural Metro bought several services and their existing contracts in the Gainesville, Georgia area to consolidate their competition. Shortly after purchasing the businesses, Rural Metro lost the customer base due to poor service. They pulled out of the local market. The void was filled by government services. Similarly, AMR had the contract for North Fulton County. They recently lost this contract due to poor service. (p. 6)

One of the benefits of having these two major players in the local market was that their service overflowed into Gwinnett County. They placed trucks within the county to provide non-emergency transportation to patients in nursing homes and other medical facilities. Their departure from the market left no one available to pick up the pieces. Soon after Rural Metro and AMR closed their doors, two small private services entered the picture, however they have not



had the staffing or units available to handle the volume of requests. Unfortunately, the balance of the transport requests has come to the fire department.

In addition to the lack of availability of non-emergency transport services, the number of those who may potentially need this type of service is on the increase in Gwinnett County. The vast majority of patients requiring non-emergency services appear to be older Americans. This portion of the population is growing rapidly. Kasprzak (2003) agrees:

In Gwinnett County, the population of those in the 65 to 74 age bracket is projected to grow from 31,599 in 2000 to 42,669 in 2010. From 1990 to 2000, that population grew 76.5 percent and the population of seniors over the age of 74 rose 114.9 percent for the same period, according to the state Office of Planning and Budget. (p. 1A)

There is a growing perception among the personnel of the department that these non-emergency transports are having a negative impact upon the department's ability to provide emergency services. While there has been no formal survey to confirm this impression, it remains a constant topic of conversation among field and administrative personnel alike. If this concern is valid, there is potential risk to the success of the overall emergency operations of the department.

This project is linked to the Understanding One's Changing Community module in the Leading Community Risk Reduction course. The project also addresses the United States Fire Administration's goal to appropriately respond in a timely manner to emergent issues.

## LITERATURE REVIEW

The purpose of this literature review is to examine relevant documents and data in order to determine answers to the following questions. First, how has providing non-emergency medical transportation impacted the emergency response capabilities of the Gwinnett County Department of Fire and Emergency Services? Secondly, what options are available to provide non-emergency medical transportation to patients? And finally, what are the costs of providing non-emergency medical transportation?

As is the case with any organization, perception, whether or not reality based, can be the driving force behind the decision making process. Research has shown that the culture of a population or organization can influence one's perception. Wade and Tarvis (1993) agree, "...culture affects perception in many other ways: by shaping our stereotypes, directing our attention, and telling us what is important to notice and what is not." (p.187) The underlying culture within emergency services, especially the culture of the Gwinnett County Department of Fire and Emergency Services is one of emergency only service. Presently, the perception exists among many in the department is that providing non-emergency medical transportation has created a negative impact upon the department's ability to provide service to those with an emergent need. Fortunately, the leadership of the department has recognized the importance of identifying whether or not this is a perception or the problem actually exists. In a short-term review, Gwinnett Special Operations Chief Mitchell (2003) found that during the months of April, May, and June, 2003 that there were 671 times that a rescue unit had to respond into a second due area because the first due rescue was transporting a non-emergency patient. This represents twelve percent of the total 5592 calls for service during that time. Of the 671 total calls, forty-percent (289) required advanced life support service and sixteen percent (104)

required emergency basic life support care. (personal communication, September 25, 2003) It is recognized that this data is of a limited time period, however it is felt that this should be considered representative of a larger period of time. One should consider the impact to be potentially severe when longer response times are required for ALS trained and equipped units to arrive at the scene of an true emergency. Davis (2003) emphasizes this point:

The USA Today survey and data analysis show that, of the 250,000 Americans who die outside of hospitals from cardiac arrest each year, between 58,000 and 76,000 suffer from a treatable short circuit in the heart and therefore are highly savable. (p. 1)

Many times non-emergency patients are transported to hospitals outside of Gwinnett County, even though there are hospitals within the county. The reasons for this vary, but normally it is because the patient is already established with the receiving system. Quite simply, transporting the patient to a hospital within the county would essentially require an additional transport later in the day to the patient's normal receiving facility. While Gwinnett County actually lies within the suburbs of the city of Atlanta, the department's units suffer similar transport times as many urban areas, mostly because of traffic congestion. McDowell (2003) recognizes a hopeful solution, "...when an ambulance is tied up transporting a patient to the hospital, other ambulances may need to be transferred or called in the area." (p.46) This sounds like a good idea, and is attempted on a daily basis in Gwinnett County. However, when one rescue moves to another response zone to provide coverage they are leaving another area vulnerable. Often one rescue ends up covering three or four response zones.

In addition to the impact on response times, the potential for negative impact to personnel exists. The relation to the negative impact to personnel, as it relates to emergency operations, consists mostly within the attitudes and beliefs of the individual. The concept is similar to what

the Gwinnett County Department of Fire and Emergency Services experienced when the fire department first accepted responsibility for providing emergency medical services. Dowling (1989) explains, “As an administrator, you hear statements like ‘I’m a paramedic; I don’t fight fires, I save lives’.” (p.7) This thought process was prevalent for many years. Now, the department is experiencing the attitude of “I’m a paramedic, I don’t transport non-emergency patients.”

The literature provides various options for providing non-emergency medical transportation while minimizing the impact to the department’s ability to provide emergency service. The underlying focus of any attempt to provide non-emergency transportation should be the impact to the well being of the citizens. Snyder (2002) clearly agrees:

When considering the role of the fire department, and –in particular- the Gwinnett County Fire Department, the delivery of service to the citizens should be the determining basis for all decisions. If the demand for service exists, then the fire department must provide the resources to meet the demand. (p.1)

There have been some very creative ways identified to provide non-emergency transportation for patients across the country. As more and more providers of EMS are called upon to provide non-emergency transportation, creativity will play a major role in accomplishing the task. Presently, most options identified include the use of third party modes of transportation such as taxis and private ambulances. McDowell (2003) suggests that, “Taxi vouchers can be given to patients who have no serious medical complaints but who need transportation to a doctor’s office, pharmacy, clinical or other non-emergency destination.” (p.49)

Phoenix Fire Department has experimented with using limited-duty personnel to staff a service van. The vehicle is staffed by three personnel, that otherwise would be sitting behind a desk, to

transport non-emergent patients to clinics, hospitals, or other receiving facilities. McDowell (2003) adds, “The vehicle can be dispatched (or called for by on-scene units) for patients who need transportation...at the discretion of the company officer.” (p.48) Both of these options have potential for providing the needed service.

In addition to offering alternative modes of transportation, some suggest that alternative destinations may reduce impact to emergency service providers. Currently, the State of Georgia does not allow for this option. The Rules of Department of Human Resources Public Health, Chapter 290-5-30, Emergency Medical Services clearly state,

The patient shall be transported by the ambulance service to the hospital of his/her choice providing that the hospital chosen is within reasonable distance of the patient’s location and is capable of meeting the patient’s needs. (p.32)

Alternative destinations, such as clinics, are not mentioned anywhere in the current rules.

Much of the literature describes the utilization of private ambulance services to compliment the emergency service provider’s ability ensure that non-emergent patients have access to transportation. Criss (2001) provides one example, “Tampa, Florida passes off non-emergent 911 calls to a private BLS provider and informs the public that these calls may not get a rapid response.” (p.69) The calls are prioritized based upon the information provided by the caller. McDowell (2003) explains how some departments manage a variation of this system:

Calls for service are screened to identify the most appropriate level of response. Fire department ambulances will respond to ALS indicated calls and assess the patient, and if it’s determined that the patient isn’t in critical condition or doesn’t need immediate transport, then the private ambulance can be used for transport. (p.50)

Other departments, such as Tampa, rely on the dispatchers to identify the level of

response provided. The caller's information is used to determine whether or not the fire department handles the call or passes it off to a private service that provides basic life support care. Criss (2001) describes Tampa's method:

All Alpha calls –those that are not time-dependent emergencies- are passed off to the closest private BLS ambulance provider for a routine (no lights and siren) response. The dispatcher holds the caller on the phone while contacting the private company and then gives the caller an approximate ETA, which could be up to 60 minutes. (p.69)

In addition to these options, information is available that suggests the fire department, and specifically the Gwinnett County Department of Fire and Emergency Services, should consider adding the appropriate number of trucks and staff to provide non-emergency transport independently of the emergency service and outside agencies. This option, although potentially expensive, may well pay for itself. The ultimate benefit to adding this additional service would be complete control of operations and the ability to ensure quality care to the citizens of the county. This option could also be considered a last resort attempt to provide non-emergency transportation to those in need. Snyder (2002) emphasizes, "While this may seem a liberal interpretation that could overextend the ability to deliver service effectively, the reality is the fire service provides product delivery on a default basis" (p.1) In other words, the department is providing the service anyway, it may as well get completely in the business of non-emergency transport.

Identification of the costs of each option is of vital importance when considering the feasibility of each option. Expenses must be measured with regard to monetary costs, political costs, and an estimate of potential damage to the system if nothing is done.

Damage to the system's operational success is measured by projecting the increased negative impact to Gwinnett's ability to provide emergency responses. The cost of ignoring the non-emergency transport impact would be realized by a compounded eight to ten percent increase in this type of call over the years. This growth would increase the number of times that rescue units are not available for emergency response.

The cost in the current political arena is an unknown. Given the volatility of the current political environment and the upcoming election year, this cost will not be investigated.

The monetary costs of the options are much more easily estimated. The use of taxi vouchers within Gwinnett County would require the fire department to budget approximately \$90,000 for the year 2005. This figure is based upon the current projection of 3000 non-emergency transports estimated for 2003. Mitchell (2003) estimates, "We average an eight to ten percent increase in call volume per year, it is safe to assume that the non-emergency calls will increase using at least the same rate." (personal communication, September 25, 2003) The figure of \$90,000 is based upon adding ten percent to the projected 2003 number of calls for the years 2004 and 2005. A telephone canvas of eleven local taxi companies showed that \$25.00 per transport would be sufficient for a taxi company to provide this service. (See Appendix A)

The cost of establishing a service vehicle staffed with limited duty personnel would be minimal. Gwinnett County Department of Fire and Emergency Services already staffs two vehicles per 24-hour shift as couriers for various activities. A cadre of limited duty personnel is available to increase the staffing on each of these vehicles to two personnel. Changing the focus of this assignment would require establishing operating guidelines and could be accomplished with little effort.

The costs involved with introducing alternative receiving facilities into the equation could be of minimal impact to fire departments. However, the time, effort, and political cost could be high. In order to change the Department of Human Resources rules, a journey through the state bureaucracy would be necessary. The true cost of this change is difficult to forecast.

The cost of introducing a public-private partnership with local private ambulance services would also be of little cost to the fire department. Costs are limited to the preparation and management of the agreement. Mitchell (2003) agrees, “The cost of implementing and managing the system are virtually non-existent. These things are done by personnel already on the payroll.” (personal communication, September 25, 2003) The cost that cannot be adequately identified is the potential cost of damage because of poor quality of service. Mitchell (2003) cautions, “There must be a strong relationship between the administrations of the fire department and the private service to ensure continuity of quality care.” (personal communication, September 25, 2003)

Finally, the option that suggests a fire department provide complete non-emergency transportation services is costly, at least initially. Specifically, the start-up costs for Gwinnett to become a player on the field would be high. Projections must include the federal government’s reimbursement allowances. Snyder (2003) explains:

Revenue projections utilize the Center for Medicare and Medicaid Services basic life support non-emergency transport formula for reimbursement (NFA 27). Projections have been adjusted to reflect average mileage and geographic locations for Gwinnett County. All of the projections are based on the Federal Government’s minimum allowed revenue of \$215.00 for each call. (p.5)

Given the amount of reimbursement and Snyder’s (2003) projection of 6000 non-emergency calls per year, the system could pay for itself by the year 2009. Snyder (2003) provides support:



The non-emergency project will deliver a Net Present Value (NPV) of \$694,099 and an Internal Rate of Return (IRR) of twenty-four percent at the end of 2015. The initial cash outlay in 2004 is projected at \$899,454. The critical period for maximum cash expenditure will be in 2004. The cumulative cash flow will reach positive returns in 2009. (p.6)

It must be realized that Snyder's (2003) projections include providing non-emergency services to all three hospitals within the county as well as the current non-emergency transports handled by the fire department. A staff of ten personnel and three fully equipped ambulances will be required to begin operation.

Costs to implement programs should also include potential cost savings to current programs. There are potential savings from initiating any of the options given. Most of the savings comes in the form of saving wear and tear on vehicles and staff, attitudes of personnel, and a general improvement in services. Criss (2001) provides support to this theory:

Cutting back on responses that must meet strict response time guidelines benefit the community in many ways:

- reduces costs by reducing number of vehicles and crews that must be available
- on-duty crews are more available for true emergencies
- reduces risk of traffic accidents
- encourages the medical community to consider flexible responses to patient needs

(p.69)

## **PROCEDURES**

The purpose of this applied research project is to determine the true impact of non-emergency medical transportation upon the department's ability to carry out emergency operations.

The first step in the research process is to collect any available data related to Gwinnett County Department of Fire and Emergency Services call type and volume. The data selected, call volume, patient transports, number of incidents that required the response of units other than the first due unit, and calls to medical facilities is used to determine the impact to the department's ability to provide emergency response.

A search of the literature is completed to determine potential options available for a fire department, and specifically the Gwinnett County Department of Fire and Emergency Services, to provide non-emergency transportation. Numerous articles provide descriptions of various options.

The final step in the research consists of determining the costs of the options identified. The literature review provides assistance with identifying costs, and a canvas of local taxi companies completes the process (Appendix A).

### **Limitations**

The most noticeable limitation to this research is the fact that inadequate data exists over a significant period of time in regards to response times, call type, and call location. The Gwinnett County Department of Fire and Emergency Services, like many providers, does not collect response data over a large spectrum of criteria. Davis (2003) quotes Harold Shaitberger, President of the International Association of Firefighters, "Unfortunately, says Shaitberger, very

few fire departments and other EMS providers currently collect sufficient data to provide meaningful evaluations of their systems.” (p.4)

### **Definition of Terms**

ALS – Advanced Life Support. Units staffed and equipped with paramedic level personnel and equipment.

BLS – Basic Life Support. Units staffed and equipped with emergency medical technician level personnel and equipment.

Rescues - Units capable of transporting patients, may be ALS or BLS.

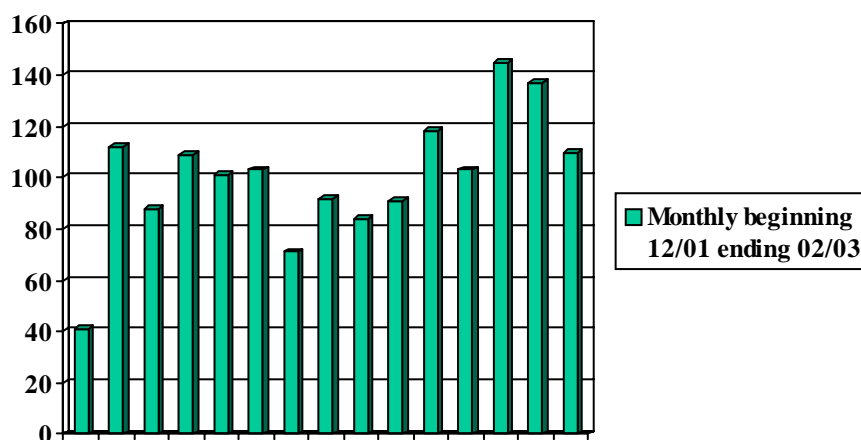
Non-emergency transport - Transportation of patients who do not require ALS care.

## **RESULTS**

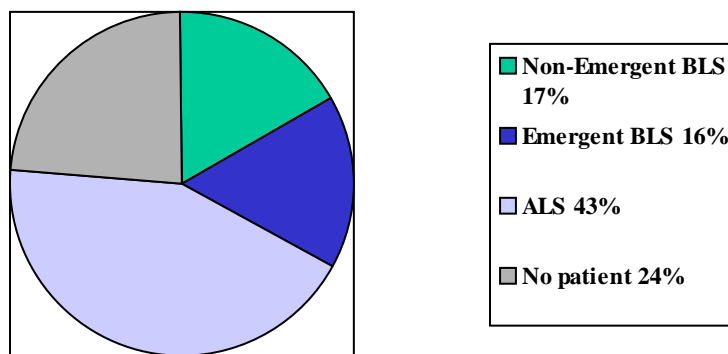
The results of the research clearly indicate that providing non-emergency medical transportation has a negative impact on the Gwinnett County Department of Fire and Emergency Services’ ability to provide emergency response. Rescue units are often busy with non-emergency transports while calls for emergency assistance are handled by second due or other units. The research also provides several options available for fire departments to provide non-emergency transportation while minimizing the impact on emergency response. The costs of the options vary from inexpensive to very expensive.

**Answers to Research Questions** Research Question #1. How has providing non-emergency medical transportation impacted the emergency response capabilities of the Gwinnett County Department of Fire and Emergency Services? The data reviewed clearly indicates that the department’s response to some patients requiring emergency transportation is delayed because the first due rescue is already transporting a non-emergent patient. There has been a noticeable

increase in requests for service from medical facilities located in Gwinnett County. While the historical data is limited, it does predict potential growth. The chart below represents monthly call volume to medical facilities (nursing homes, clinics, and doctor's offices).



The limited data provided by Mitchell (2003) indicates that there were 671 calls during a ninety-day period (April-June 2003) where the first due rescue was not available to respond within their response area. This figure represents 12% of the 5,592 total calls during the period. (personal communication, September 25, 2003) The following chart shows the types of calls that received response by second due or other units.



While the physical impact to the department's ability to carry out emergency operations is obvious, the impact to personnel's attitude is difficult to measure. The literature provides evidence that continued impact should be expected as the population of the country, and specifically the county, continue to grow larger and older.

Research Question #2. What options are available to provide non-emergency medical transportation to patients? A review of available literature is necessary to identify options available to provide transportation alternatives for non-emergent patients. The research provides a multitude of options by which a fire department might deliver non-emergency medical transportation to its citizens. While the options vary in scope, costs and complexity, they do seem to fall within two basic categories; provide the service utilizing department staff and equipment, or contract with someone else to provide transportation. Each of the options has benefits. For example, a public/private partnership allows the department to keep costs at a minimum. In contrast, using department staff and equipment allows the department to maintain high quality control. Other options provide a varying degree of relief and associated difficulties. Transporting non-emergent patients, either by public conveyance or limited-duty fire department personnel, to facilities other than hospitals requires rule changes.

Research Question #3. What are the costs of providing non-emergency medical transportation? The monetary costs of alternative transportation methods vary from nearly no dollars to several hundred thousand dollars. A thorough literature review, as well as a canvas of local taxi companies (See Appendix A), provides the needed information to answer this question.

The least expensive option involves a public/private partnership with a private ambulance service. The cost has been estimated to be very low, as any work required by the fire department would be minimal and handled by personnel already on the payroll.

Similar costs would be realized by using limited-duty personnel to transport non-emergency patients. However, in addition to utilizing employees already on the payroll, there will be costs related to fuel and vehicle maintenance. This option may also provide the ability for the fire department to receive federal reimbursement. However, as previously stated, this option may require state rule changes.

Expenses grow when considering the use of taxis to transport patients. This cost would have to be incurred by the fire department because no other reimbursement criteria exist. The estimated cost of providing this service is \$90,000 for the year 2005.

The final option considered; staffing and equipping non-emergency transport vehicles is costly. The initial cost of this option is nearly \$900,000 for the first year. While this option is expensive, it must be considered that it will allow for federal reimbursements to be paid to the fire department.

Consideration must also be given to soft costs, or those that do not necessarily require money. Political costs could be minimal or very expensive in regards to relationships that could influence any or all aspects of operating the fire department. The literature suggests that EMS providers investigate transporting patients to facilities other than hospitals. This option would require rule changes across the State of Georgia. The potential cost of attempting this change, as well as the time required, suggest that this option is not feasible in the near future. Political costs with regard to the other options identified remains an unknown.

Damage to the department's ability to carry out emergency operations should be estimated and calculated as potential costs. If the problem of rising call volume to non-emergency incidents is ignored, the payment will be increased response times and decreased service to those with an emergency need.

An unexpected result of this study is the realization that many emergency service providers, including the Gwinnett County Department of Fire and Emergency Services, do not collect useful data. Response times, patient outcomes, and operational effectiveness are just a few of the data categories that would be useful in determining the impact of non-emergency transportation upon the operational abilities of departments.

## **DISCUSSION**

The results clearly indicate that the ability of the Gwinnett County Department of Fire and Emergency Services' to provide emergency service is negatively impacted by transporting non-emergency patients. Mitchell (2003) found that, for a short period of time, 12% of the calls to which Gwinnett rescues responded were non-emergency incidents. (personal communication, September 25, 2003) McDowell (2003) sums up the problem:

There's little doubt that when an ambulance is used to transport a non-acute patient to an emergency room, it then isn't available to respond to true emergencies that may occur.  
(p.46)

The data predicts consistent growth patterns with regard to population and call volume across the country as well as within Gwinnett County. Fackelmann (2003) agrees, "...trips to the emergency room in 2001 rose to 107.5 million, up from 89.8 million in 1992." (p.5A) The local elderly population continues to grow, adding to the potential for non-emergency transports. Kasprzak (2003) found that:

The number of senior households with a single occupant rose dramatically over the 10-year period [1990-2000] from more than 600 to more than 6,000 according to Gwinnett County Health and Human Services. (p.1A)

Armed with this prediction, departments must consider implementing alternative means of transporting non-emergency patients. In other words, the problem is not going away – it will only grow larger.

There are many creative options already available to fire departments for experimentation or implementation. The options vary in effort and expense. The underlying theory appears to be that departments must decide whether they wish to provide non-emergency service or arrange for someone else to provide it.

Providing taxi vouchers to patients to be transported to alternative facilities or to hospital emergency departments could be a viable option. Two issues prevent immediate implementation of such a plan. Mitchell (2003) suggests, “There would be many operational hurdles to such a plan, including guideline enforcement and political perception” (personal communication, September 25, 2003) The second issue relates to transportation to alternative facilities. While this would essentially fall outside the parameters of the state rules that prohibit transport to any other facility, the legal question of departmental responsibility remains. Mitchell (2003) adds, “The line of legal responsibility could get fuzzy when it comes to recommending an alternative facility.” (personal communication, September 25, 2003)

Transportation by rescue to alternative facilities is a long-term option in that there must be legislative support and action to change current rules. Berry (2002) provides responses from past Gwinnett Fire Chief Michael Buice, “(We must consider) urgent care centers and de-regulation of transport to them.” (p.7) Berry (2003) continues to quote Buice:

The State of Georgia Legislative Delegation will have to buy into our problems so they can assist in solving them. We will need to educate the legislators on what we do and how we do it. (p.6)



The utilization of limited-duty personnel to transport non-emergency patients can provide relief to emergency service rescues. Added benefits potentially enjoyed are added value of service from limited-duty personnel and continued medical support for the patient. Expenses may also be offset by federal reimbursement.

Private/public partnerships appear to be a viable option provided a satisfactory, binding agreement can be reached. Gwinnett County Department of Fire and Emergency Services has attempted to engage a private/public partnership with two local private ambulance companies. The agreement (See Appendix B) enlists the private providers to supplement the counties response force in order to limit the unavailability of county rescues. The agreement states:

It is also instituted in order to maintain County emergency ambulance availability by not committing County ambulances to non-emergent situations. Therefore, the parties desire to cooperate in providing ambulance services in addition to those provided by the County. (p.1)

This agreement was submitted for approval in April 2003 and as of this writing has not been approved. There is no prediction concerning if or when it will be approved.

Internal provision of the service can be costly but allows departments to maintain quality control and seek reimbursement from the federal government. The potential for the Gwinnett County Department of Fire and Emergency Services to be forced to provide complete non-emergency transportation is likely. Snyder (2003) agrees:

The ambulance industry is in a state of decline—primarily due to reduced government reimbursement. Because of this decline, the Gwinnett County Fire Department provides service to some non-emergency customers by default. A further decline in service

providers could lead to the Department providing all ambulance services—both emergency and non-emergency. (p.1)

While this venture would be costly at first, the potential for the service to pay for itself does exist.

Regardless of the method, something must be done. Davis (2003) puts it plainly, “People die needlessly because some cities fail to make basic, often inexpensive changes in the way they deploy ambulances, paramedics, and fire trucks.” (p.1)

In addition to alternative methods of transportation, personnel will be required to recognize that EMS now involves this non-emergency aspect of service. It appears that a culture change is required similar to the one that occurred when EMS was born into the department. As the department did then, it must recognize again what Halstead (1999) states, “The organization that provides an integrated EMS delivery system will provide its citizens with a quality environment and a secure and superior quality of life. (p.14)

It appears that a culture change is needed to complete the transformation of the EMS system. Paramedics and EMTs must begin to realize that non-emergency patients require the same professional care and attitude that is provided to emergent patients. Evans (2003) agrees:

A significant portion of our call volume involves patients in nursing homes or other skilled facilities. Paramedics often perceive them as non-challenging and become frustrated with the information relayed from the staff. Nonetheless, nursing homes and their clients are customers when they call into the 911 system and despite the frustration, they deserve a professional response. (p.18)

The implications of the results to the Gwinnett County Department of Fire and Emergency Services are many. The department must begin to collect useful data with regard to

emergency and non-emergency operations. The data currently available appears to be driven by the problems the department is currently facing. This reaction data collection disallows substantial historical reference and predictions must be made with limited support. The department must realize that non-emergency response and transport is a growing part of the service it provides. Criss (2001) agrees:

With the response time clock driving so many EMS systems, one would guess that paramedics spend most of their shifts helping patients with acute emergencies that require advanced life support care. In fact, the opposite is true. (p.68)

The department must face the reality that non-emergency medical transports are negatively impacting its ability to place rescues on the scene of emergencies. The department must research and develop methods by which non-emergency transports can be handled without reducing the department's ability to provide emergency services.

## **RECOMMENDATIONS**

Based on this study, it is recommended that fire departments, especially the Gwinnett County Department of Fire and Emergency Services, recognize that non-emergency medical transportation has the potential to be a large part of the service that their organization provides to its citizens.

A major recommendation resulting from this study is that all emergency service providers implement data collection processes that will provide adequate information to be used to make educated decisions. Unfortunately, Davis (2003) found that,

Most other U. S. cities don't know their response times, refuse to disclose them, or use imprecise measures that are meaningless in determining whether emergency crews reach victims in time to save them. (p.2)

Given this, it is recommended that the Gwinnett County Department of Fire and Emergency Services immediately begin, and continue to, collect relevant data with regards to emergency and non-emergency operations. It is further recommended that this data be used to predict future needs and drive outcomes.

It is recommended that fire Gwinnett County Department of Fire and Emergency Services investigate and develop a two-step approach to providing non-emergency medical transport.

The first step is to develop and implement a private/public partnership with local private ambulance companies to provide non-emergency transportation. The development and implementation would be inexpensive to the fire department and could meet the needs of the department and patients alike. The added benefit would be increased business for the local private ambulance companies. While this option appears viable, it must be understood that quality control and reliability would not be easily controlled by the fire department. Therefore, the agreement between the fire department and the private ambulance companies must identify operational parameters and consequences for poor performance. (See Appendix B)

The second step recommended should be prepared as a backup plan should the first step fail. It is suggested that the Gwinnett County Department of Fire and Emergency Services prepare to implement an internal transportation service for non-emergent patients. This option allows the department to retain control of all aspects of the service provided to its citizens. While initially expensive, the service will receive cost off-sets through federal reimbursements, not to

mention the continued high status enjoyed as a service provider. Coleman (2003) adds weight to this:

As time goes on, the fire service will continue to be challenged. There's a target rich environment for the fire service to become even more of a value to the communities we serve. As we adapt to that role, we need to ensure that we preserve our image as problem solvers. (p.49)

While the remaining options have merit, they may not provide the impact of the previous two options. Taxi vouchers will alleviate some of the non-emergency transports, however, a large portion of transports in Gwinnett County are from medical facilities and require the use of a stretcher. Utilizing limited-duty personnel to transport non-emergency patients would provide similar relief as compared to the taxi voucher option. The same limitations would apply.

It is recognized that transporting non-emergency patients to facilities other than hospitals may decrease the transport times for rescues. It is recommended that departments and providers begin the process of rule changes that would allow this option. While this would be a long-term process and would not provide any immediate relief, the rule change could provide a viable option for the future.

Regardless of the options investigated and implemented it is highly recommended that public awareness be raised with regard to emergency medical services. If any option to providing non-emergency medical transportation is going to work, the public must be familiar and comfortable with the process. Sachs (1999) recommends implementing a public information, education, and relations program (PIER):

EMS PIER is vital to successful EMS service. Public support, system abuse, public awareness, and education are all areas that a PIER campaign can address. Such a program is

similar to a fire education program, but it specifically addresses EMS issues, such as injury prevention, citizen CPR, and the appropriate ways to call for medical help. (p.8)

## REFERENCES

- Berry, J. (2000, June). *Gwinnett County Fire Department Emergency Medical Services...Alignment for the New Millennium*. Marietta, GA: Shorter College.
- Coleman, R. (2003, August). Why do we do what we do? *Fire Chief*, Volume 47, Number 8, pp. 46-49.
- Criss, E. (2001, September). Think Radically About Response Times and Transport. *EMS Best Practices*, Volume 2, Number 9, pp. 68-69.
- Davis, R. (2003, July). Many lives are lost across the USA because emergency services fail. *USA Today*, p. 1. Retrieved July 30, 2003 from the World Wide Web:<http://www.usatoday.com/news/nation/ems-day1-cover.html>.
- Davis, R. (2003, July). Only strong leaders can overhaul EMS. *USA Today*, p. 1. Retrieved July 30, 2003 from the World Wide Web:<http://www.usatoday.com/news/nation/ems-main.html>.
- Davis, R. (2003, July). The price of just a few seconds: People die. *USA Today*, p. 1. Retrieved July 29, 2003 from the World Wide Web:<http://www.usatoday.com/news/nation/ems-main.html>.
- Dowling, J. (1989). *Fire and EMS (one system or two)*. Emmitsburg, MD: National Fire Academy, Executive Officer Program.
- Evans, B. (2003, July). It's time to embrace 360 [degree] customer service. *Fire Chief*, Volume 47, Number 7, pp. 18-21.
- Facklemann, K. (2003, June). Report: ER visits climb while emergency departments fall. *USA Today*, p. 5A.

- Halstead, T. W. (1999). *Developing a Canine Search and Rescue Team for the Virginia Beach Fire Department*. Unpublished bachelor's thesis, Bluefield College, VA
- Kasprzak, S. (2003, July). Senior population on the rise. *Gwinnett Daily Post*, pp. A1, 14A.
- McDowell, T. (2003, May). Taxi with a Twist. *Fire Chief*, Volume 47, Number 5, pp. 46-51.
- Gwinnett County Department of Fire and Emergency Services. (2003). *Private Ambulance Provider Terms and Conditions*, Lawrenceville, GA: Author
- Sachs, G. (1999). *Officers Guide to Fire Service EMS*. Saddlebrook, NJ: Fire Engineering Books and Videos.
- Snyder, C. (2003, December). *Aggregate Market Analysis*. Unpublished master's thesis, University of Tennessee, Knoxville.
- Snyder, C. (2003, July). *Proposal for Non-Emergency Ambulance Service*, Unpublished master's thesis, University of Tennessee, Knoxville.
- Wade, C. and Tarvis, C. (1993). *Psychology* (3<sup>rd</sup> ed.). New York: HarperCollins College Publications.



## APPENDIX A

### Taxi Cab Rates (August 2003)

<b>Company Name</b>	<b>Pick-up Fee</b>	<b>Per-mile Fee</b>	<b>Average Cost per Patient</b>
Gwinnett Taxi	\$2.50	\$1.60	\$18.50
Reliable Cab & Limo	0	\$2.00	\$20.00
Gwinnett Cab & Limo	5 miles=\$10.00/10 miles=\$17.00		\$17.00
North East Cab	\$2.50	\$1.50	\$17.50
Best Taxi	\$2.00	\$1.50	\$17.00
A Best Gwinnett Taxi	\$2.00	\$2.00	\$22.00
A Best Executive Taxi	\$2.25	\$2.00	\$22.25
City Cab	\$2.50	\$1.60	\$18.50
Yami's Taxi	\$2.00	\$2.00	\$22.00
Taxi Tu Taxi	\$2.00	\$1.80	\$20.00

Gwinnett County is 434 square miles shaped somewhat like a square. There are three hospitals located within the county and approximately ten hospitals within eight miles from the southwestern county boarder. Clinics, non-emergency medical facilities, and other potential patient destinations are also abundantly located within the geographical area. It is estimated that non-emergency medical transports would average a ten-mile trip. The Average Cost per Patient given in the table above represents the cost of a ten-mile trip. The average tip for the driver is estimated at \$2.00. For the purposes of estimating contracted Price per Patient will be \$25.00 per patient. This will allow all of the taxi services included in the survey to meet costs with a small margin of profit built in to encourage participation.

**APPENDIX B****Private Ambulance Provider Terms and Conditions**

This Agreement is entered into this first day of \_\_\_\_\_, 2003, between the Gwinnett County Department of Fire and Emergency Services (referred to as the "County") and \_\_\_\_\_, a licensed ambulance service pursuant to the laws of the State of Georgia (referred to as the "Ambulance Provider.") This Agreement is instituted because ambulances, in addition to those operated by the County, are periodically needed to provide emergency medical ambulance service in order to minimize the response time to the population of Gwinnett County. It is also instituted in order to maintain County emergency ambulance availability by not committing County ambulances to non-emergent situations. Therefore, the parties desire to cooperate in providing ambulance services in addition to those provided by the County.

**SECTION A.**

The Ambulance Provider shall:

- . Provide emergency and non-emergency ambulance service to patients in Gwinnett County from their homes or other incident scenes in accordance with requests from the County pursuant to applicable laws and regulations.
- . Staff ambulances with at least one certified paramedic and one EMT on all emergency responses.
- . Have an agent/representative available twenty-four (24) hours a day, seven (7) days a week to respond to any and all inquiries, problems, and issues.
- . Notify the Gwinnett Communication's Center of accurate ETAs to any response inquiries.

- . Notify the County immediately when situations arise that prevent response or extend responses beyond the aforementioned ETA.
- . Transport patients to their chosen destination if within Gwinnett County without regard to payment prior to transport. With patients desiring transport beyond County boundaries, the method of payment may be negotiated directly between the Provider and the patient prior to transport. The Provider shall always offer to transport the patient to the nearest appropriate hospital and according to DHR rules and regulations.
- . Ensure that all vehicles and equipment used to transport patients are in good mechanical operating condition.
- . Shall afford the County access to any and all vehicles used to transport patients.
- . Shall afford the County access to any and all maintenance records regarding vehicles used to transport patients.
- . Ensure that all vehicles used to transport patients are maintained and equipped as ambulances in accordance with all applicable laws and regulations.
- . Ensure that all vehicles used to transport patients are maintained in a clean condition, free of foreign matter and offensive odors.
- . Ensure that all vehicles are appropriately licensed and registered in accordance with all applicable laws and regulations.
- . Ensure that all drivers of vehicles have an appropriate, current and valid drivers license and have held a license for a minimum period

of one (1) year.

- . Upon request, provide the County with the names and certified Motor Vehicle Records (MVRs), as maintained by the Georgia Department of Public Safety.
- . Upon request, ensure that employees of the Ambulance Provider submit to a drug screen. The drug screen shall be performed in a manner to ensure the identity and integrity of the specimen and screen results. The results of the drug screens shall, upon request, be made available to the County.
- . Upon request, provide the County with records of incurred violations by drivers of any motor vehicle according to, but not limited to, the Georgia Uniform Rules of the Road (O.C.G.A. Section 40-6-1, et seq.)
- . Upon request, provide a listing of personnel along with their certification numbers.
- . Afford the County access to any and all training records of employees.
- . Ensure that employees are covered by comprehensive general liability insurance in the amount of \$1,000,000.00.
- . Ensure that all vehicles are covered by automobile liability coverage in the amount of \$1,000,000.00 combined single limit liability and excess coverage in the amount of \$1,000,000.00.
- . Ensure that all employees wear appropriate uniforms and are neat in appearance at all times. They must also be provided appropriate infectious disease protective wear and general safety wear for use in unsafe environments.

- . Provide the County with the name, address, and telephone number of the Ambulance Provider's Medical Director.
- . Ensure that each employee understands his/her responsibility:
  - To follow the policies, standards and practices of the County when operating on the emergency scene.
  - To keep in confidence any and all medical and health information pertaining to all patients.
- . Inform and train employees of appropriate infection control policies and procedures and other training as required in accordance with OSHA Regulations and of other applicable regulatory agencies.
- . Submit charges to all transported patients at a rate acceptable to the County that is conducive to the general well being of its citizens
- . Notify the County in writing within twenty-four (24) hours of any and all problems, accidents, injuries, complaints, or mechanical difficulties with regard to services provided under this Agreement. This notification shall be directed to the Office of the Fire Chief.
- . Provide the County with the name of the Chief Executive Officer of the Ambulance Provider, and if a partnership, corporation, firm or association, the names, addresses and phone numbers of any individual with fifty (50) percent or more proprietary interest.
- . Upon request, provide the County a Quality Improvement Plan as well as any identified patient care or operational concerns and actions taken under this plan.

- . Comply with all policies and procedures of the County when engaged in the response, treatment, and transport of patients.
- . Conduct, upon request, a criminal record history investigation through the Georgia Crime Information Center or any other appropriate source and inform the County of such.
- . Obtain the appropriate and necessary authorization from the Georgia Department of Medical Assistance, the Health Care Financing Administration (HCFA) in order to obtain Medicare/Medicaid reimbursement for Medicare/Medicaid patients transported under this Agreement.
- . Produce documents and records as reasonably requested by the County.

## **SECTION B**

The County shall:

- . Offer to orient the Ambulance Provider and its employees to County policies and procedures as they relate to services provided under this Agreement.
- . Retain the right to request the Ambulance Provider to withdraw from the services provided under this Agreement any employee whose behavior may be deemed hazardous to patient care and services or whose personal characteristics prevent desirable relationships with the County.
- . Not assume liability for any injury that the Ambulance Provider may receive during their course of providing services under this Agreement.

## **SECTION C**

The Ambulance Provider and the County agree to assist each other with emergency and non-emergency medical service within a plan mutually agreed upon that is efficient and benefits the Department's operations and the general well being of the County's citizens. This is accomplished by:

- . Establishing geographical areas of the County conducive to prompt response and availability of Ambulance Providers.
- . Mutually assisting the other with **emergency requests** according to the following call distribution plan.
  - If the County Rescue Unit is available within its assigned first in territory, it will be automatically dispatched to incidents as appropriate within that territory.
  - If the County Rescue Unit is not available within its assigned first in territory, the dispatcher will use discretion and may elect to utilize the appropriate Ambulance Provider if the response time is less than the next due County Rescue Unit. The dispatcher will consider the time necessary to relay information via telephone, dispatch the call, location of the unit, and readiness to respond by the Provider.
- . Mutually assisting the other with managing **non-emergency requests** according to the following plan.
  - The Ambulance Provider will market healthcare facilities with the intent of the facilities requesting service directly

to the Provider and not the 911 System.

- Calls into the 911 System will be screened according to established protocols. Appropriate requests will prompt the 911 center to contact the area Ambulance Provider and obtain availability and ETA.
- If appropriate and according to approved methods, the Ambulance Provider will be dispatched.
- . The County's employees and Ambulance Provider's employees will work together to maintain an environment which provides quality patient care and quality services.
- . Agree to formulate suitable radio communications in order to effectively communicate between services.
- . Any and all utilization of the Provider shall be at the discretion of the County.
- . The Ambulance Provider and its employees shall not participate in any employee benefits provided by the County, including, but not limited to workers' compensation insurance, disability, pension or other employee plans.
- . The Ambulance Provider will carry workers' compensation, unemployment insurance and furnish written proof of such compliance to the County, if requested.



## SECTION D

It is further agreed and understood:

- That the term of Agreement shall be for a period of one (1) year commencing on \_\_\_\_\_, 2003 and terminating on \_\_\_\_\_, 2004; provided, however that either party may sooner terminate this Agreement, with or without cause, upon thirty (30) days written notice. Any notices required under this Agreement must be given by certified mail, return-receipt requested, or delivered by hand and should be sent to the following persons at the addresses indicated below:
- Chief Jack McElfish (Ambulance Provider)  
Gwinnett County Department (Address)  
of Fire and Emergency Services  
1900 Five Forks Trickum Road  
Lawrenceville, Georgia 30044
- This Agreement may be modified by mutual consent provided any and all modifications will be in writing and signed by officials of the County and the Ambulance Provider.
- This agreement shall be renewed annually. If this Agreement is renewed without modification, such renewal must be signed by the officials authorized to execute the original Agreement.

This Agreement is entered into on this first day of        2003.

**By:** \_\_\_\_\_

**Date**

**By:** \_\_\_\_\_

**Date**